

LAKE NORMAN REGIONAL BICYCLE PLAN

January 20, 2011



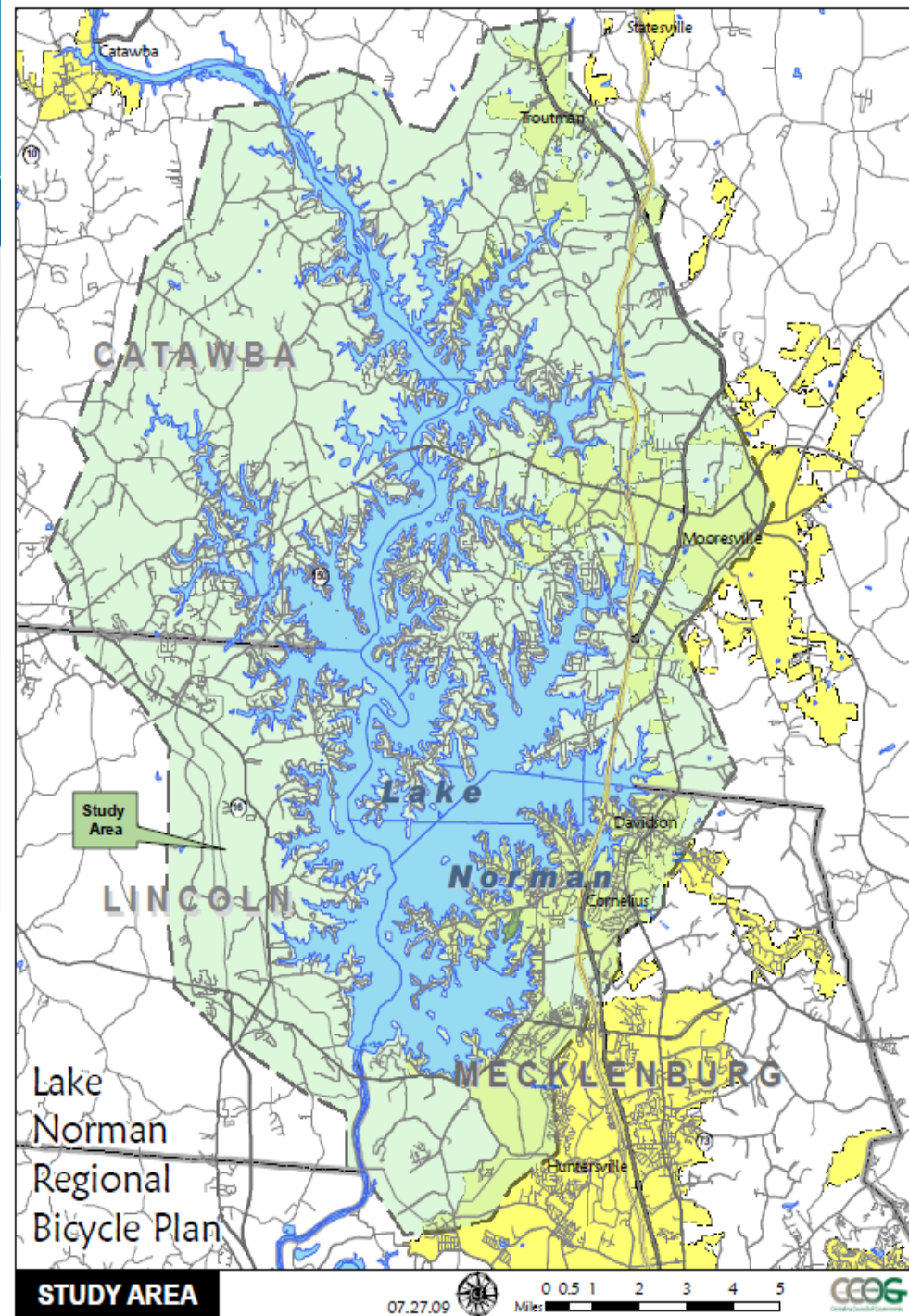
NCDOT Assignment

- Develop first regional bicycle plan in North Carolina
- As much as possible, identify off-road sections for overall plan
 - Multi-purpose paths
 - Single track (where parallel routes exist)
- Incorporate tourism into routes and orientation of plan
- Make it “enduring”
 - Identify an overarching organization to advocate for, and coordinate, implementation of the route
 - Include local governments in plan process



Plan Study Area

- Four counties
- Five municipalities
- Three transportation planning organizations
- Two NCDOT divisions
- 520 miles of shoreline
- 100,000 people
- 50,000 jobs
- One lake



Background - Prior Plan

- Envisioned as an off-road route along lake by Frank Johnson, former NCDOT Board of Transportation member
- Initial plan developed by Centralina Council of Governments
- Lake Norman Bike Route approved by Lake Norman RPO, Unifour RPO, and Mecklenburg-Union MPO in 2006-2007
 - Implementation and advocacy left to local governments
 - No prioritization of segments for implementation
 - Route was *not* formally approved by NCDOT (they had no regional bicycle plan process)



Stakeholders

- County planning staff
- Municipal planning staff
- Lake Norman RPO, Unifour RPO, and MUMPO
- Several bicycle advocates
- Duke Energy
- Carolina Thread Trail
- Interested citizens
- NCDOT Division 10 and 12 staff



Mission and Vision

Mission for the PLAN:

The Lake Norman Regional Bicycle Plan will identify and detail the means of creating the Lake Norman Regional Bicycle Route, segment-by-segment, and maintaining this valuable asset for future generations.

Vision for the ROUTE:

A continuous, multi-jurisdictional bicycle route that will encircle Lake Norman and connect with neighboring communities, destinations, and the various local bicycle facilities, in order to provide a safer, useful, and attractive transportation and recreation resource for a wide range of users within the surrounding four-county region.



Cyclists Aren't All the Same...

Design Bicyclist- Persons who are comfortable riding a bicycle near traffic on roads with moderate volumes, either on a wide-outside lane, paved shoulder, or a bicycle lane. This user's needs are best met through striped bicycle lanes, wide outside lanes, or, where there are lower amounts of traffic, wide paved shoulders. Very low-volume signed shared roadways may also be appropriate.

Experienced Bicyclist- Persons who are comfortable riding *with* traffic as opposed to the "design bicyclist", who is comfortable operating *near* traffic. In rural areas these bicyclists value long stretches of road with few curb cuts or turning movements. In urban areas they can easily operate on roads in traffic with prevailing speeds up to 25 mph. Their needs are best met by signed shared roadways, wide outside lanes, paved shoulders, and dedicated bicycle lanes.

Novice Bicyclist- Relatively inexperienced bicyclists traveling relatively short distances at a low rate of speed. These bicyclists typically value scenic views and recreation destinations, such as parks. Their needs are best met by low-volume, low-speed residential roads with signage, and, where necessary, traffic calming. In more urban areas these users' needs are best met with dedicated multi-purpose paths.

We designed the Lake Norman Regional Bicycle Route for the Design Bicyclist.



Route Selection Methodology

1. **Simplicity:** easy to understand from both a regional and on the ground perspective. This affects signage and route designation.
2. **Safety:** avoid major intersections, interchanges, and sections of high-volume roads as much as possible.
3. **Scenery:** include sections along Lake Norman or attractive local character, such as agricultural or forested land, and eye-catching residential or commercial development.
4. **Off-Road Linkages:** Can the route derivate from a road and use an existing or planned greenway, dirt path, or multi-purpose path?
5. **Utility:** Will the route serve a transportation or recreation purpose, according to the variables found in the Segment Evaluation Form?
6. **Coordination** with Existing Plans and Future Projects: Is the section already identified on an approved plan or is a relevant transportation project planned for this road?



Route Evaluations

- 52 segments on initial or ultimate routes
- All segments are illustrated in the following maps
- Segments identified based on logical termini, consistent recommended improvements, and length
- Scoring based on evaluation spreadsheet
- 24 points possible
- Actual scores ranged from 4 to 23



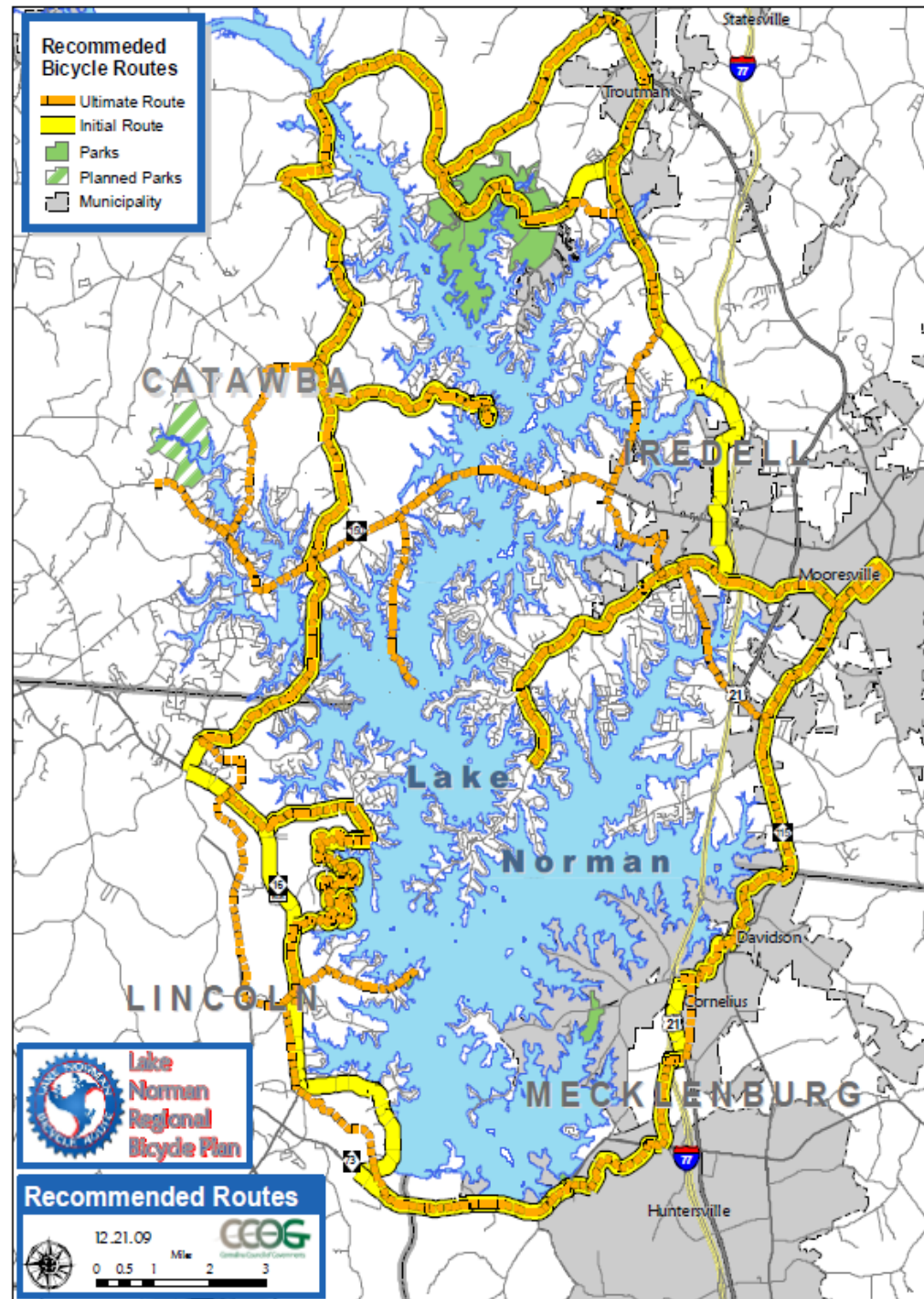
Recommended Routes

Initial

- Reflects what is possible in the short term
- 89 miles long
- Three miles non-road

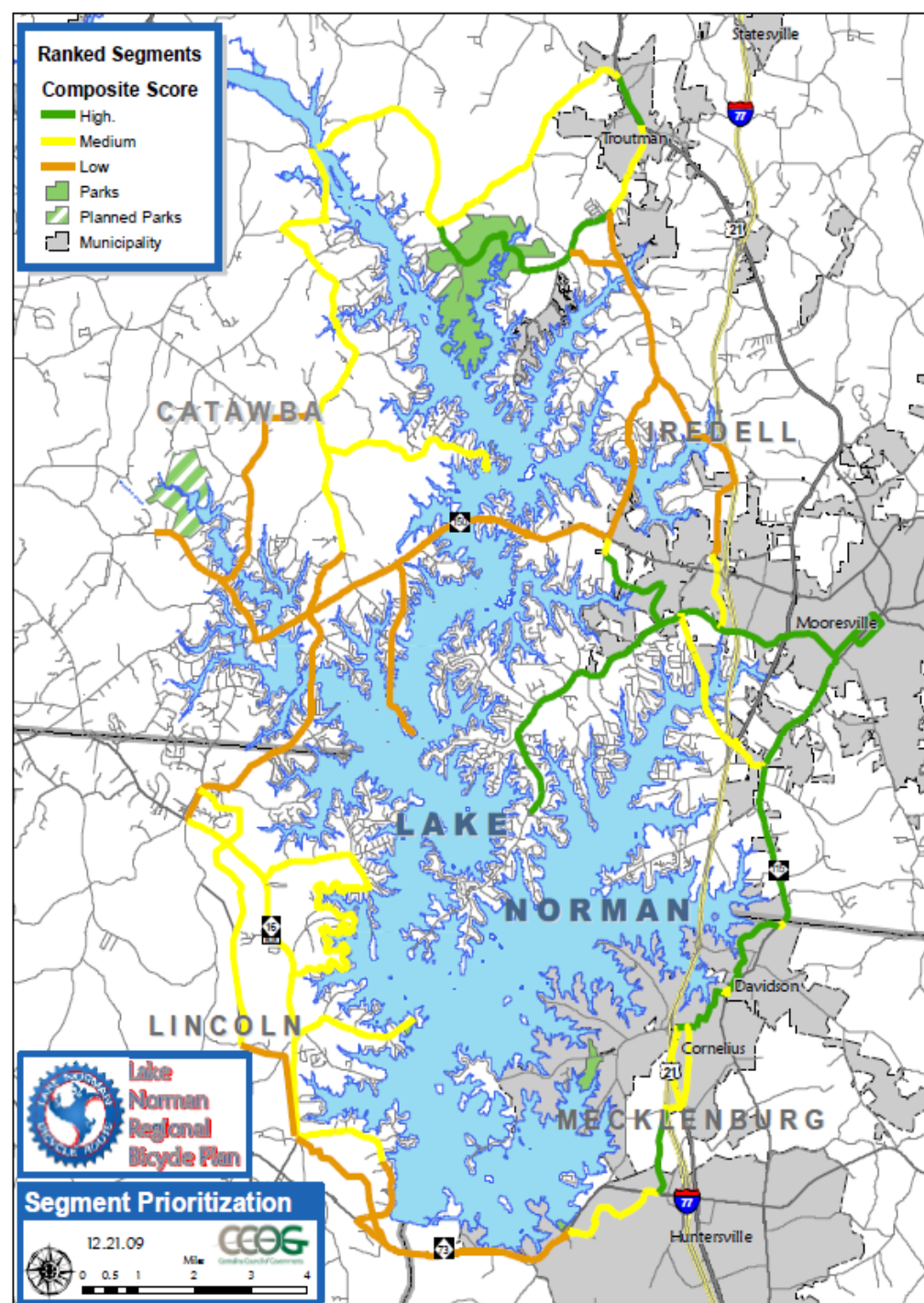
Ultimate

- Represents the ideal ultimate route
- 117 miles long
- 16 miles non-road



Overall Scores

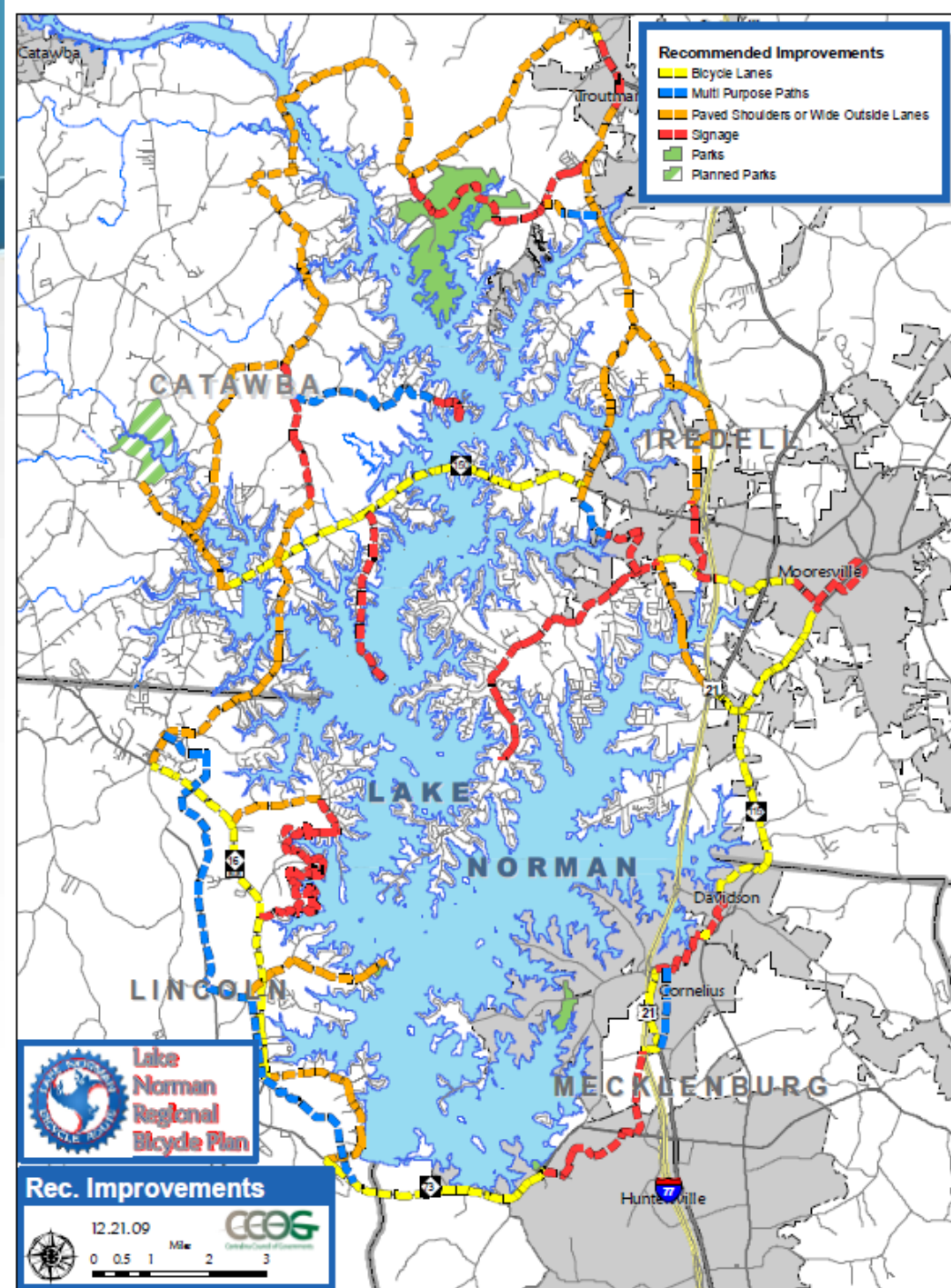
- Prioritization: High, medium, low
- **High:** First projects to be implemented. There are a limited number of projects in this category, and are the focus of grant applications (17+ points)
- **Medium:** Second-tier projects for grants, unless signage only is required (11-16 points)
- **Low:** Often higher-cost projects that are implemented as a part of other processes (road widenings or new construction) (4-10 points)



Recommended Improvements

The improvements are:

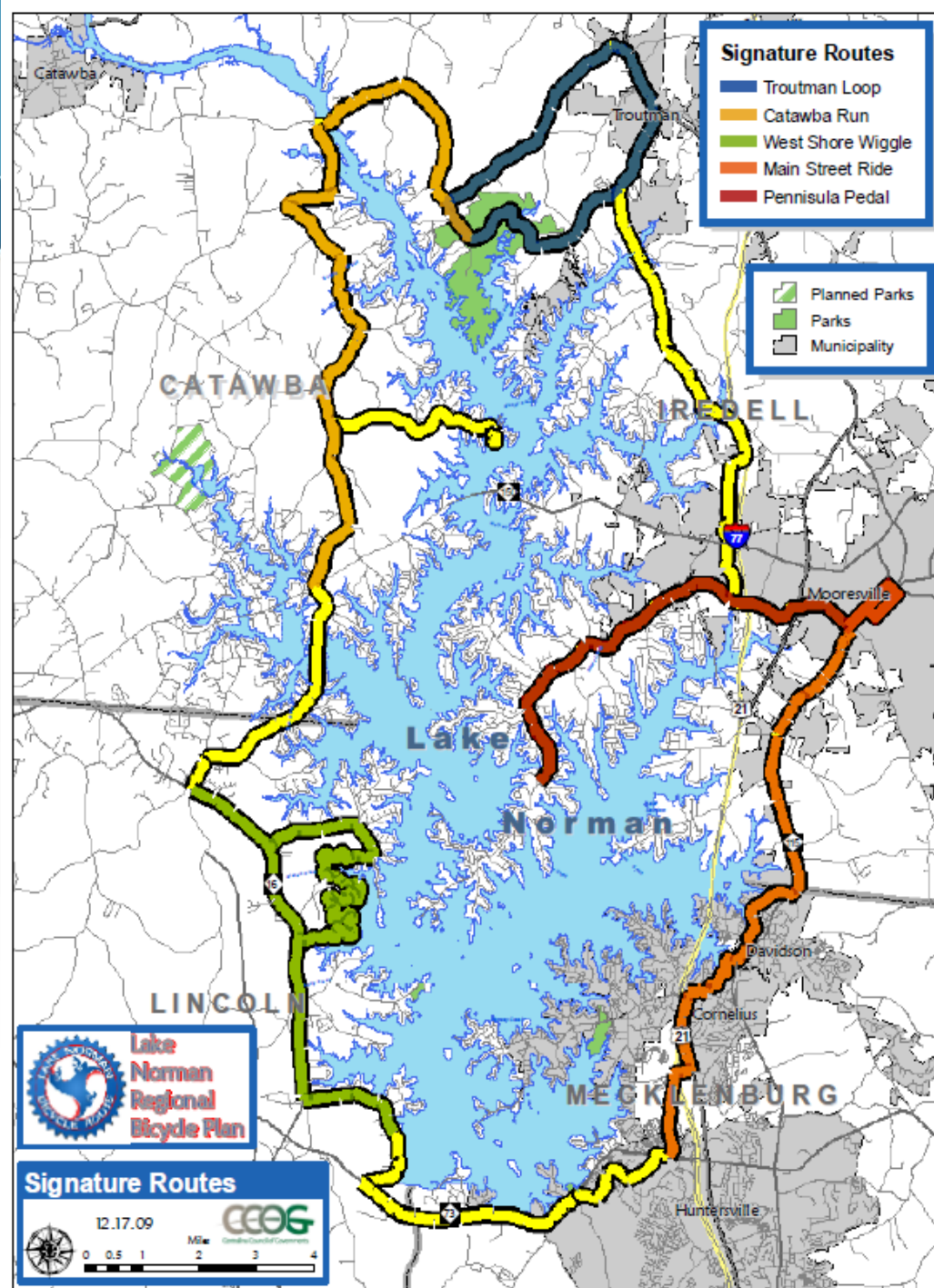
- coded for each segment
- accurate for the majority of the segment
- sufficient for the needs of the “design” bicyclist



Signature Routes

These five routes will be prominently featured in the brochure developed for the overall route, and will be prioritized for installing signage.

- Each Route has a unique identifiable character
- Roughly 10 – 15 miles long with identifiable termini
- Relative safety



Implementation Strategies

- Installing paved shoulders or bicycle lanes in coordination with road resurfacings
- Restriping roads
- Developing as a part of traditional NCDOT transportation project process
- Requiring as a part of the development review process (in proportion to the development's impact)
- Implementation by local municipalities and counties



What Will a Completed Route Look Like? Or... *How Do We Know When We are Successful?*

- Combination of on and off-road segments
- Connections between origins and destinations
- Utilized by a variety of groups
- Attracts visitors to the Lake Norman area
- Is a cherished asset to the region
- Provides genuine alternatives to vehicular travel
- A sustained commitment to the route



Lake Norman Bicycle Route Task Force

- The route will require years to implement, and require the coordination of many different organizations
- NCDOT requested that an enduring organization be created to review amendments to the route, coordinate improvements, and approve requests for use of the route logo.
- Steering Committee recommended an organization that meets twice a year, as needed, to review route updates and grant applications
- Cost to local governments: None.
- Administration: Centralina COG will staff the **Task Force**, with coordination from Western Piedmont COG in Catawba County
- Membership: All affected governments, transportation planning agencies, and NCDOT.



Contacts

For further information about the

Lake Norman Bicycle Route

Plan and Task Force:

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